

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 5 1. (Currently Amended) A down hole device comprising:
 - an outer tubular member having a series of slots therein, said slots being arranged about the exterior of said outer tubular member at an angle of inclination of between 25 degrees to 45 degrees;
 - an inner member disposed within said outer tubular member;
- 10 -means for moving said outer tubular member in a first direction in order to subject the outer tubular member to a downward force so that the outer tubular member is expanded along said slot;

wherein said slots are arranged about said outer tubular member in a first spiral pattern which extends to a second spiral pattern.
- 15 2. (Canceled)
3. (Canceled)
- 20 4. (Canceled)
5. (Canceled)
6. (Canceled)

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7. (Canceled)

8. (Currently Amended) A method of expanding an anchoring device within a casing, the anchoring device comprising: an outer tubular member having a series of slots therein, said 5 slots being arranged about the exterior of said outer tubular member in a spiral pattern; an inner cylindrical member disposed within said outer tubular member; a setting apparatus comprising: a setting sleeve connected to said outer tubular member; a mandrel being connected to said inner cylindrical member; a chamber positioned between said outer setting sleeve and said mandrel; and a ratchet means, disposed between said setting sleeve and said mandrel; the 10 method comprising:

-lowering the anchoring device to the desired level;

-applying a first force to said inner cylindrical member in a first direction in order to subject the inner tubular member to an upward force;

-applying a second force to said outer tubular member in a second direction in 15 order to subject the outer tubular member to a downward force, and wherein the step of applying the first force and the second force comprises: applying a pressure to said chamber; and moving said setting sleeve downward in response to said hydraulic pressure and wherein the ratchet means allows movement of said setting sleeve in a first direction relative to said mandrel but prevents movement in a reverse direction;

20 -expanding said outer tubular member along said slots;

-engaging said outer tubular member against the inner wall of the casing.

9. (Canceled)

25 10. (Canceled)

11. (Currently Amended) The method of claim [[10]] 8 wherein said spiral pattern is arranged in a first direction.

12. (Currently Amended) The method of claim [[10]] 8 wherein said spiral pattern is
5 arranged in a first spiral direction, and wherein said first spiral pattern extends to a second spiral direction.

13. (Currently Amended) The method of claim [[10]] 8 wherein the anchoring device contains a plug device so that a flow stream from the casing is prevented from flowing through
10 the anchoring device.

14. (Currently Amended) The method of claim [[10]] 8 wherein the anchoring device contains a one-way valve so that a flow stream from the casing is allowed to flow in a first direction through the anchoring device but is precluded from flowing in a second direction
15 through the anchoring device.

15. (Currently Amended) The method of claim [[10]] 8 wherein a cover material encases said outer tubular member and the cover material comprises an elastomeric member disposed about the outer tubular member and the step of engaging said outer tubular member against the
20 inner wall of the casing further comprises sealingly engaging the elastomeric member against the inner wall of the casing.

16. (Currently Amended) The method of claim [[10]] 8 wherein the outer tubular member has attached thereto a gravel pack screen and the method further comprises: placing a gravel
25 pack slurry about the gravel pack screen.

17. (Currently Amended) A down hole device disposed within a well bore, the down hole device comprising:

-an outer tubular having a series of spiral slots therein, said spiral slots being arranged about the outer portion of said outer tubular;

5 -an inner tubular disposed within said outer tubular;

-means for moving said outer tubular in a first direction in order to engage the shoulder so that a downward force is applied to the outer tubular thereby expanding the outer tubular along said spiral slots, and wherein said moving means comprises a setting tool having a setting sleeve connected to said outer tubular and a mandrel being connected to said inner 10 tubular, and wherein said mandrel causes an upward force against the bottom end of said outer tubular and wherein said setting sleeve causes a downward force against the top end of said outer tubular so that said outer tubular expands along said spiral slots;

-an elastomeric cover material member disposed about said outer tubular;

15 -and wherein said spiral slots are arranged about said outer tubular in a first spiral pattern and wherein said first spiral pattern extends to a second spiral pattern.

18. (Canceled)

19. (Canceled)

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20. (Canceled)

21. (Currently Amended) The down hole device of claim [[20]] 17 further comprising:

-stroke limit means, disposed between said setting sleeve and said mandrel, for 25 terminating the movement of the mandrel in a first direction.

22. (Canceled)

23. (Canceled)

5 24. (Currently Amended) A method of expanding a down hole device within a well bore, the down hole device comprising: an outer tubular member having a series of spiral slots therein, said spiral slots being arranged about an exterior portion of said outer tubular member and wherein the angle of said spiral slots is between 25 degrees and 45 degrees, and an inner cylindrical member disposed within said outer tubular member; the method comprising:

10 -lowering the down hole device through an inner portion of a tubing, with the tubing being concentrically disposed within the well bore;

 -lowering the down hole device to the desired level within the well bore;

 -applying a first force to said inner cylindrical member in a first direction in order to subject the inner cylindrical member to an upward force;

15 -applying a second force to said outer tubular members in a second direction in order to subject the outer tubular member to a downward force;

 -moving said outer tubular member in the second direction;

 -expanding the outer tubular member along said spiral slots, and wherein said expanded outer tubular member has an expanded outer diameter that is larger than the inner portion of the tubing;

20 -contacting the exterior of said outer tubular member against the wall of the well bore;

-lifting the down hole device within the well bore;

-cleaning the walls of the well bore with the exterior of said outer tubular member;

25 -pushing the down hole device down into the well bore;

-cleaning the walls of the well bore with the exterior of said outer tubular member.

25. (Canceled)

26. (Canceled)

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27. (Canceled)

28. (Canceled)

10 29. (Canceled)

30. (Currently Amended) The method of claim [[24]] 60 wherein the down hole device contains a plug device so that a flow stream from the well bore is prevented from flowing through the down hole device.

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31. (Canceled)

32. (Original) The method of claim 24 wherein an elastomeric member is disposed about the exterior of the outer tubular member and the step of expanding said exterior of said 20 outer tubular member to engage the walls of the well bore further comprises sealingly engaging the elastomeric member against the wall of the well bore.

33. (Canceled)

25 34. (Previously Presented) A down hole device for use in a well bore, the down hole device comprising:

-an outer tubular member having a series of slots about the exterior of said outer tubular member, said slots being arranged at an angle offset from the longitudinal center of axis of the outer tubular member in a spiral mode and wherein said outer tubular member has an outer diameter portion less than an inner diameter portion of the well bore and wherein said

5 slots are arranged about said outer tubular member in a first spiral pattern and wherein said first spiral pattern extends to a second spiral pattern;

-an inner cylindrical member disposed within said outer tubular member;

-means for moving said outer tubular member in a first direction in order to subject the outer tubular member to a first force thereby expanding the outer tubular member

10 along said slots so that said expanded outer tubular member contacts the wall of the well bore;

-a cover disposed about said outer tubular member.

35. (Canceled)

15 36. (Canceled)

37. (Previously Presented) The down hole device of claim 34 wherein said moving means comprises:

-a setting tool having a setting sleeve connected to said outer tubular member

20 and a mandrel being connected to said inner cylindrical member, and wherein said mandrel causes an upward force against the bottom end of said outer tubular member and wherein said setting sleeve causes a downward force against the top end of said outer tubular member so that said outer tubular member expands.

25 38. (Original) The down hole device of claim 37 further comprising:

-ratchet means, disposed between said setting sleeve and said mandrel, for allowing movement of said setting sleeve in a first direction but preventing movement of said setting sleeve in a reverse direction.

5 39. (Previously Presented) The down hole device of claim 34 wherein said moving means comprises:

-a setting apparatus comprising: a setting sleeve connected to said outer tubular member; a mandrel being connected to said inner tubular member; a chamber positioned between said outer tubular member and said inner tubular member; and wherein a pressure 10 entering said chamber causes said setting sleeve to move downward so that said outer tubular member expands.

15 40. (Original) The down hole device of claim 39 further comprising an elastomeric member disposed about said cover.

15 41. (Currently Amended) A method of setting a plug within a casing, the plug comprising: a first anchoring device operatively associated with a second anchoring device, wherein said first anchoring device comprises a plurality of extendable arms and wherein said second anchoring device comprising: an outer tubular member having a series of spiral slots 20 arranged about the exterior of said outer tubular member, said outer tubular member being attached to said first anchoring device; an inner member disposed within said outer tubular member; and wherein the method comprises:

-lowering the plug to the desired level;
-setting the first anchoring device at the desired level by extending the plurality of 25 arms to engage the wall of the casing;

- moving said outer tubular member in a first direction in order to subject the outer tubular member to a downward force;
 - expanding said outer tubular member along said slots;
 - engaging the outer diameter of said outer tubular member against the inner wall 5 of the casing;
 - placing a slurry on the plug.

42. (Canceled)

10 43. (Currently Amended) The method of claim [[42]] 41 wherein said spiral slots are
arranged in a first direction.

44. (Original) The method of claim 42 wherein said spiral slots are arranged in a first spiral direction, and wherein said first spiral direction extends to a second spiral direction.

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45. (Canceled)

46. (Original) A method of gravel packing a subterranean zone penetrated by a casing, the method comprising:

20 -lowering an anchoring device to the desired level, the anchoring device comprising: an outer tubular member having a series of slots therein, said slots being arranged about the exterior of said outer tubular member in a spiral pattern; an inner member disposed within said outer tubular member, said anchoring device having a gravel pack screen attached at a distal end:

25 -moving said outer tubular member in a first direction in order to subject the outer
tubular member to a downward force;

-expanding said outer tubular member along said slots;
-engaging the outer diameter of said outer tubular member against the inner wall of the casing;
-placing a gravel pack slurry into the annulus of the casing.

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47. (Original) The method of claim 46 wherein said anchoring device has a cover material disposed about the outer tubular member and wherein the step of engaging the outer diameter of said outer tubular member against the inner wall includes engaging said cover material against the inner wall.

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48. (Original) The method of claim 47 wherein said cover material is made of a permeable material and the method further comprises:

-flowing a portion of a production stream from the subterranean zone through said permeable material;

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-flowing the remaining portion of the production stream through an inner bore of said anchoring device.

49. (Original) The method of claim 47 wherein said cover material is made of an impermeable material and the method further comprises:

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-sealingly engaging said impermeable material against the wall of the casing;
-flowing a production stream from the subterranean zone through an inner bore of said anchoring device.

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50. (Original) The method of claim 47 wherein said spiral pattern is arranged in a first direction.

51. (Original) The method of claim 47 wherein said spiral pattern is arranged in a first spiral direction, and wherein said first spiral pattern extends to a second spiral direction.

52. (Currently Amended) An apparatus for use in a well comprising:

5 -a first anchor member;

10 -a second anchor member operatively associated with said first anchor member and wherein said second anchor member has contained thereon a plurality of slots formed in a spiral pattern;

15 -setting tool means for setting said first anchor member and said second anchor member within the well;

-and wherein said first anchor member has a first inner member and a first outer member and wherein said second anchor member has a second outer member attached to said first inner member and a second inner member attached to said first inner member and wherein said setting tool means includes first means for moving said first and second outer members in a first direction and second means for moving said first and second inner members in an opposing direction.

53. (Canceled)

20 54. (Canceled)

55. (Original) A method of gravel packing a subterranean zone penetrated by a casing, the method comprising:

25 -placing a gravel pack screen within the casing, and wherein an annulus is formed within the casing;

 -placing a gravel pack slurry about said gravel pack screen;

-lowering an anchoring device to the desired level, the anchoring device comprising: an outer tubular member having a series of slots therein, said slots being arranged about the exterior of said outer tubular member in a spiral pattern; an inner member disposed within said outer tubular member, said anchoring device having a gravel pack screen attached

5 at a distal end;

-latching a distal end of said anchoring device onto the top of said gravel pack screen;

-moving said outer tubular member in a first direction in order to subject the outer tubular member to a downward force;

10 -expanding said outer tubular member along said slots;

-engaging the outer diameter of said outer tubular member against the inner wall of the casing.

56. (Original) The method of claim 55 wherein said anchoring device has a cover material disposed about the outer tubular member and wherein the step of engaging the outer diameter of said outer tubular member against the inner wall includes engaging said cover material against the inner wall.

57. (New) A down hole device comprising:

20 -an outer tubular member having a series of slots therein, said slots being arranged about the exterior of said outer tubular member at an angle of inclination of between 25 degrees to 45 degrees;

-an inner member disposed within said outer tubular member;

-means for moving said outer tubular member in a first direction in order to subject the outer tubular member to a downward force so that the outer tubular member is expanded along said slot; wherein said moving means comprises:

-a setting tool having a setting sleeve operatively associated with said outer tubular member and a mandrel being connected to said inner member, and wherein said mandrel causes an upward force against the bottom end of said outer tubular member and wherein said setting sleeve causes a downward force against the top end of said outer tubular
5 member so that said outer tubular member expands;

-ratchet means, disposed between said mandrel and said setting sleeve, for allowing movement of said outer tubular member in a first direction but preventing movement in a reverse direction.

10 58. (New) A down hole device comprising:

-an outer tubular member having a series of slots therein, said slots being arranged about the exterior of said outer tubular member at an angle of inclination of between 25 degrees to 45 degrees;

-an inner member disposed within said outer tubular member;

15 -means for moving said outer tubular member in a first direction in order to subject the outer tubular member to a downward force so that the outer tubular member is expanded along said slot;

setting apparatus comprising: a setting sleeve connected to said outer tubular member; a mandrel being connected to said inner member; a chamber positioned between said outer
20 tubular member and said inner tubular member; and wherein a pressure entering said chamber causes an upward force to be applied to said mandrel and a downward force to be applied to said setting sleeve so that said outer tubular member expands;

-stroke limit means for limiting the movement of said mandrel in a first direction.

25 59. (New) A down hole device disposed within a well bore, the down hole device comprising:

- an outer tubular having a series of spiral slots therein, said spiral slots being arranged about the outer portion of said outer tubular;
- an inner tubular disposed within said outer tubular;
- means for moving said outer tubular in a first direction in order to engage the shoulder

5 so that a downward force is applied to the outer tubular thereby expanding the outer tubular along said spiral slots, and wherein said moving means comprises a setting tool having a setting sleeve connected to said outer tubular and a mandrel being connected to said inner tubular, and wherein said mandrel causes an upward force against the bottom end of said outer tubular and wherein said setting sleeve causes a downward force against the top end of said

10 outer tubular so that said outer tubular expands along said spiral slots; wherein said setting tool further comprises; a chamber positioned between said outer tubular and said inner tubular; and wherein a pressure entering said chamber causes said setting sleeve to move downward;

- an elastomeric cover material member disposed about said outer tubular;
- stroke limit means, disposed between said setting sleeve and said mandrel, for

15 terminating the movement of the mandrel in a first direction.

60. (New) A method of expanding a down hole device within a well bore, the down hole device comprising: an outer tubular member having a series of spiral slots therein, said spiral slots being arranged about an exterior portion of said outer tubular member and wherein the

20 angle of said spiral slots is between 25 degrees and 45 degrees, and an inner cylindrical member disposed within said outer tubular member; a ratchet means, operatively associated with said outer tubular member and said inner cylindrical member the method comprising:

- lowering the down hole device through an inner portion of a tubing, with the tubing being concentrically disposed within the well bore;

25 -lowering the down hole device to the desired level within the well bore;

-applying a first force to said inner cylindrical member in a first direction in order to subject the inner cylindrical member to an upward force;

-applying a second force to said outer tubular members in a second direction in order to subject the outer tubular member to a downward force;

5 -moving said outer tubular member in the second direction, but preventing movement in a reverse direction by said ratchet means;

-expanding the outer tubular member along said spiral slots, and wherein said expanded outer tubular member has an expanded outer diameter that is larger than the inner portion of the tubing;

10 -contacting the exterior of said outer tubular member against the wall of the well bore.

61. (New) A method of expanding a down hole device within a well bore, the down hole device comprising: an outer tubular member having a series of spiral slots therein, said spiral slots being arranged about an exterior portion of said outer tubular member and wherein the angle of said spiral slots is between 25 degrees and 45 degrees and wherein said spiral slots are arranged in a first spiral pattern that extends to a second spiral pattern, and an inner cylindrical member disposed within said outer tubular member, a setting apparatus comprising: an outer setting sleeve connected to said outer tubular member; a mandrel being connected to said inner cylindrical member; a chamber positioned between said outer setting sleeve and said mandrel; the method comprising:

-lowering the down hole device through an inner portion of a tubing, with the tubing being concentrically disposed within the well bore;

-lowering the down hole device to the desired level within the well bore;

25 -applying a first force to said inner cylindrical member in a first direction in order to subject the inner cylindrical member to an upward force;

-applying a second force to said outer tubular members in a second direction in order to subject the outer tubular member to a downward force;

-moving said outer tubular member in the second direction by applying a pressure into said chamber, and moving said outer setting sleeve downward in response to said
5 pressure;

-expanding the outer tubular member along said spiral slots, and wherein said expanded outer tubular member has an expanded outer diameter that is larger than the inner portion of the tubing;

-contacting the exterior of said outer tubular member against the wall of the well
10 bore.

62. (New) A method of expanding a down hole device within a well bore, the down hole device comprising: an outer tubular member having a series of spiral slots therein, said spiral slots being arranged about an exterior portion of said outer tubular member and wherein the
15 angle of said spiral slots is between 25 degrees and 45 degrees, and an inner cylindrical member disposed within said outer tubular member; a one-way valve operatively associated with the inner cylindrical member; the method comprising:

-lowering the down hole device through an inner portion of a tubing, with the tubing being concentrically disposed within the well bore;

20 -lowering the down hole device to the desired level within the well bore;

-applying a first force to said inner cylindrical member in a first direction in order to subject the inner cylindrical member to an upward force;

-applying a second force to said outer tubular members in a second direction in order to subject the outer tubular member to a downward force;

25 -moving said outer tubular member in the second direction;

-expanding the outer tubular member along said spiral slots, and wherein said expanded outer tubular member has an expanded outer diameter that is larger than the inner portion of the tubing;

-contacting the exterior of said outer tubular member against the wall of the well

5 bore;

-and wherein a flow stream from the well bore is allowed to flow in a first direction through said one-way valve but is precluded from flowing in a second direction through said one-way valve.

10 63. (New) A method of expanding a down hole device within a well bore, the down hole device comprising: an outer tubular member having a series of spiral slots therein, said spiral slots being arranged about an exterior portion of said outer tubular member and wherein the angle of said spiral slots is between 25 degrees and 45 degrees, and an inner cylindrical member disposed within said outer tubular member, wherein the outer tubular member has
15 attached thereto a gravel pack screen; the method comprising:

-lowering the down hole device through an inner portion of a tubing, with the tubing being concentrically disposed within the well bore;

-lowering the down hole device to the desired level within the well bore;

20 -applying a first force to said inner cylindrical member in a first direction in order to subject the inner cylindrical member to an upward force;

-applying a second force to said outer tubular members in a second direction in order to subject the outer tubular member to a downward force;

-moving said outer tubular member in the second direction;

-expanding the outer tubular member along said spiral slots, and wherein said

25 expanded outer tubular member has an expanded outer diameter that is larger than the inner portion of the tubing;

-contacting the exterior of said outer tubular member against the wall of the well bore;

-pumping a gravel pack slurry about the gravel pack screen.

5 64. (New) A method of setting a plug within a casing, the plug comprising: a first anchoring device operatively associated with a second anchoring device, wherein said first anchoring device comprises slip means having projections thereon, and wherein said second anchoring device comprising: an outer tubular member having a series of spiral slots arranged about the exterior of said outer tubular member, said outer tubular member being attached to
10 said first anchoring device; an inner member disposed within said outer tubular member; and wherein the method comprises:

-lowering the plug to the desired level;

-setting the first anchoring device at the desired level, and wherein the step of setting the first anchoring device includes partially embedding said projections within the wall of the casing
15 in order to engage the wall of the casing;

-moving said outer tubular member in a first direction in order to subject the outer tubular member to a downward force;

-expanding said outer tubular member along said slots;

-engaging the outer diameter of said outer tubular member against the inner wall of the
20 casing.

-Please cancel Claims 2, 3, 4, 5, 6, 7, 9, 10, 18, 19, 20, 22, 23, 25, 26, 27, 28, 29, 31, 33, 35, 36, 42, 45, 53, 54 without prejudice nor disclaimer as to the subject matter contained therein.